The relationship between psoriasis and depression: A multiple mediation model

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This study examined the relationship between psoriasis and depression, proposing a multiple mediation model to analyse the relationship. A total of 193 patients with psoriasis aged 20–67 years completed the Beck Depression Inventory, the Stigmatization Scale, the Appearance Schemas Inventory-Revised, and the Body Emotions Scale. The Body Surface Area index was used to assess severity of psoriasis. Serial multiple mediation analysis revealed that experiences of stigmatization, maladaptive beliefs about appearance and its salience to one’s self-evaluation, and negative emotional attitudes towards the body, jointly, sequentially mediated the relationship between the presence of skin lesions of psoriasis and depressive symptoms. These results highlight the importance of the associations between stigmatization and cognitive and affective aspects of body image in relation to depression in patients with psoriasis. We suggest that prevention and intervention programs for psoriasis patients that target body image enhancement would be worthy of further research.

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Introduction

Psoriasis is a common disease manifesting in the skin or joints or both (Boehncke & Schön, 2015; Parisi, Symmons, Griffiths, & Ashcroft, 2013). The disease may involve nearly all sites of the body, including facial skin and genitals. Psoriatic lesions may be painful, itchy, and often highly visible. The disease is associated with both physical and psychological burdens. To date, an extensive literature has described the co-occurrence of psoriasis and depression (Dalgard et al., 2015; Kimball et al., 2010; Schmitt & Ford, 2010). Moreover, it has been reported that patients with psoriasis are more prone to developing psychiatric disorders than those with other skin diseases (Dalgard et al., 2015; Rieder & Tausk, 2012). However, the severity of psoriasis has been found to be unrelated to the risk of depression (Cohen, Martires, & Ho, 2016). Therefore, the question remains how and under what conditions psoriasis is related to depressive symptoms.

Although it is well known that psychological factors such as stress, illness perception, and coping strategies, as well as social resources such as perceived social support, play an important role in explaining the impact of psoriasis on quality of life and psychological morbidity (Fortune, Richards, Griffiths, & Main, 2002; Janowski et al., 2012; O’Leary, Creamer, Higgins, & Weinman, 2004; Remröd, Sjöström, & Svensson, 2015; Schmitt & Ford, 2007), there is a need for more research in this field. For instance, little is known about the role played by cognitive factors, especially body image schemas. These cognitive aspects reflect one’s affect-laden beliefs about the importance and influence of appearance in one’s personal life and its salience to one’s self-worth and sense of self (Cash, 2011). These beliefs may dictate the substance of thought, emotion, and behaviour. Thus, the role played by psychological factors in dermatological conditions may be attributable to body image distress triggered by dysfunctional body image investment, including the centrality of appearance to one’s self-worth. The results of a recent study support this assumption and suggest that, in psoriasis patients, the importance of physical appearance in personal life and its salience to the sense of self is significantly associated with risk for depression (Wojtyna, Łakuta, Marcinkiewicz, Bergler-Czop, & Brzezińska-Wcisło, 2016). To reach a better characterization of the self-evaluative salience of appearance (SES) and to shed light on its emotional correlates, in this study we evaluated the mediational role of SES in depression in psoriasis, as well as its relationship with negative emotional attitudes towards the body.
Additionally, it is important to note that the appearance of the skin is almost always visible to others and is used as a marker of various roles and status positions (Donigan, Pascoe, & Kimball, 2015). Thus, one of the centrally important issues to consider is that both perception of the person suffering from psoriasis, regarding the disease, and the feedback reactions of others, may play roles in patients’ coping processes with the disease. Psoriasis compared to other skin conditions is highly stigmatizing and misconceptions that the disease is infectious and contagious are common (Donigan et al., 2015; Hrehorów, Salomon, Matusiak, Reich, & Szepeitowski, 2012). Therefore, feelings of stigmatization, including fear of rejection and humiliation, are often present in people with psoriasis (Hrehorów et al., 2012; Schmid-Ott, Schallmayer, & Calliess, 2007).

As a consequence, negative reactions in others, triggered by visible disfigurements, affect how patients think of themselves (Ayala et al., 2014; Bewley, Burrage, Ersser, Hansen, & Ward, 2014; Bundy et al., 2014; Magin, Adams, Heading, & Pond, 2010; Magin, Adams, Heading, Pond, & Smith, 2009). In situations where a person has experienced repeated social rejection and/or appearance-related prejudice, there may be profound effects on one’s self-confidence, self-image, and perceptions of the importance of physical appearance in gaining societal worth and acceptance.

According to theoretical models of the development of body image schemas, experiences such as ostracism, stigmatization, and other forms of interpersonal rejection may be pivotal in body image formation, and may represent risk factors for the development of body image-related difficulties (Cash, 2011; Thompson, 2011). We hypothesized that patients with psoriasis may internalize negative public reactions towards their skin and values expressed by others about their appearance, which in turn may result in the development of maladaptive assumptions about the importance of the body for self-evaluation and the salience of appearance to their personal lives and sense of self. Previous studies have shown that self-evaluative salience is associated with greater psychosocial and body image pathology, including body image dissatisfaction, greater internalization of appearance-related media ideals, higher levels of dysphoric body image emotions, and poorer global self-esteem, and is also negatively correlated with overall body image quality of life, which reflects the positive and negative impact of body image on one’s psychosocial quality of life (Cash, 2011; Cash, Jakatdar, & Williams, 2004; Cash, Melnyk, & Hrabosky, 2004). Thus, social rejection and stigmatization, including verbal and nonverbal communications, may increase levels of concern with body image (i.e., maladaptive body image investment) and affect the acquisition of negative body image attitudes, resulting in psychological distress that in turn may lead to depression.

Finally, it is worth emphasizing that previous studies have consistently demonstrated that clinician-assessed objective severity of psoriasis is not or is only poorly associated with psychological outcome variables (Finzi et al., 2007; Fortune et al., 2002; Janowski et al., 2012; Magin, Pond, Smith, Watson, & Goode, 2011; Richards, Fortune, Griffiths, & Main, 2001). Magin et al. (2011) reported that patients’ self-assessed rather than objective severity was associated with psychological outcomes, and models of association with psychological co-morbidities in patients with skin diseases are likely to be improved by the inclusion of self-measured disease severity. Patients’ subjective perceptions of their disease might not necessarily align with the perception of clinician and the objective measures of psoriasis severity, but may be important in explaining psychological impairments associated with psoriasis (e.g., increased prevalence of depression). Therefore, similar to several previous studies (e.g., Dubertret et al., 2006; Schmitt & Ford, 2007), in the present study the Body Surface Area (BSA) index was used as a measure of self-assessed severity of psoriasis – defined as the percentage of body surface area involved. In contrast to the Psoriasis Area and Severity Index (PASI), the BSA index does not capture aspects of the disease severity such as erythema, infiltration, and desquamation. However, we were not concerned with the clinical aspects of psoriasis, but the relationship between patients’ subjective perceptions of the surface area involvement and depression. Moreover, in previous research, clinically-assessed disease severity, clinical history variables, and specific psoriasis characteristics were consistently the least useful variables in terms of explaining variance in stress, anxiety, depression, psychological distress or disability (Fortune et al., 2002; Janowski et al., 2012; Magin et al., 2011). Zachariae et al. (2002) also reported that although PASI scores correlated significantly with self-reported severity, PASI scores were not a significant predictor of health-related and disease-specific quality of life. Taking into account all of the above, we concentrated on the patients’ perspectives and their perceptions of the disease.

Taken together, the present study focuses on the relationship between psoriasis and depression, proposing a multiple mediation model to analyse this relationship. Based on the existing literature, we hypothesized that experiences of stigmatization, resulting from the presence of skin lesions of psoriasis, would be associated with more maladaptive beliefs about appearance and its salience to one’s self-evaluation, which in turn would be associated with more negative emotional attitude towards the body. Finally, we hypothesized that the latter would be associated with greater depressive symptoms.

### Method

#### Participants

Participants (N=193, 68.4% women) consisted of adult patients with psoriasis. Participants were recruited from the Dermatology Clinic of the Silesian Medical University in Katowice, Poland. Responses from psoriasis patients were also collected in cooperation with the Polish Association of Psoriasis Patients in Bydgoszcz (Poland) and the Union of Psoriasis Associations in Poland. As shown in **Table 1**, participants’ age ranged between 20 and 67.